

AGENDA ITEM

DATE:

DECEMBER 15, 2009

TO:

CITY COUNCIL

FROM:

ROBERT L. WOODINGS, P.E.

DIRECTOR OF PUBLIC WORKS/CITY ENGINEER

INITIATED BY: LUIS ESTEVEZ

PUBLIC WORKS MANAGER

REVIEWED BY: ROBERT C. DUNEK

CITY MANAGER

SUBJECT:

MASTER PLAN FOR THE ROCKFIELD BOULEVARD

STREETSCAPE PROJECT (PW 2003.02)

RECOMMENDED ACTION:

1. Approve the Master Plan for the Rockfield Boulevard Streetscape Project

2. Direct staff to complete the final construction plans and bid specifications for Phase 1 of the project

FISCAL IMPACT:

During the 2009 Five-Year Strategic Business Plan and 2009-11 Capital Improvement Program workshops, the City Council opted to deliver the Rockfield Boulevard Streetscape Project in three distinct phases. Phase 1 of the project encompasses Rockfield Boulevard between El Toro Road and Los Alisos Boulevard. Phase 2 of the project encompasses El Toro Road to Lake Forest Drive, and Phase 3 encompasses Lake Forest Drive to Centre Street. Phases 2 and 3 were defined as Category 3 projects, which are beyond the planning horizon of the current Five-Year Strategic Business Plan.

This project is a carry-over project in the Capital Improvement Program Budget. The carry-over fund balance for this project was approved by the City Council on November 17, 2009. This project allocation is intended to cover the cost of

preparing the Rockfield Streetscape Master Plan, final construction plans, bid specifications, and construction for Phase 1 of the project. Sufficient funds exist to complete the final construction plans, and bid specifications for construction of Phase 1 of the project.

BACKGROUND:

Rockfield Boulevard between El Toro Road and Los Alisos Boulevard is a unique stretch of roadway in the City of Lake Forest as no other streetscapes contain the same dynamics and features found in this particular area. Although Rockfield Boulevard is classified as a four-lane arterial roadway, this portion of Rockfield was designed to primarily serve residential traffic. There are approximately 435 homes immediately to the east and west of Rockfield Boulevard and these residents use this portion of Rockfield exclusively to access their neighborhoods. The roadway terminates into a residential neighborhood with an additional 165 homes.

The existing visual conditions along this stretch of Rockfield Boulevard are unique and are in stark contrast when compared to other streetscapes around the City. There are currently no parkways located in Phase 1 of the project area on both sides of the street where residential perimeter block walls join sidewalks. These austere conditions do not provide an inviting pedestrian environment and are not generally compatible with the City's overall aesthetic appearance. Improved pedestrian safety along Rockfield Boulevard was a concern voiced during the public workshop process.

While developing the streetscape project alternatives, staff began to consider the merits of narrowing the roadway as a potential project alternative to improve traffic and aesthetic conditions for the adjacent neighborhoods. Staff's initial evaluation determined that a narrowed roadway could reduce traffic trips and speed on this street segment and allow for wider landscaped medians and landscaped parkways. The wider parkways could improve pedestrian safety and enhance landscape theme connectivity to the Arbor on El Toro Road. As such, staff determined it would be appropriate to present a potential narrowing option for the City Council to consider and to seek additional direction.

On January 24, 2008, the Planning Commission was presented with three-landscape conceptual plans for this project including the narrowing alternative. The Planning Commission subsequently selected its preferred landscape alternative and voted to recommend that alternative to the City Council. On July 15, 2008, the

City Council selected the Planning Commission's alternative as its preferred landscape alternative for this project and directed staff to complete the Rockfield Boulevard Streetscape Master Plan. Additionally, the City Council directed staff to study the potential of narrowing Rockfield Boulevard to two lanes between El Toro Road and Los Alisos Boulevard. In its presentation to Council, staff highlighted some of the potential benefits that narrowing Rockfield Boulevard would have on improving traffic safety, enhancing pedestrian connections and aesthetics. Since the narrowing option was not discussed during initial community outreach meetings, the City Council directed staff to engage the community for the purpose of obtaining their feedback on the potential narrowing option.

A third community workshop was held on October 28, 2008, at the El Toro Library multi-purpose room with nineteen members of the community in attendance. The majority of the comments received from the public during this workshop focused on perceived impacts the potential narrowing option would have on traffic circulation on Rockfield Boulevard. Particular concern was expressed regarding how the narrowing option would impact dropping off and picking up students at Gates Elementary School. As part of staff's presentation, a traffic study conducted for the narrowing option was shared with the community so that the public would have a better understanding of the implications of narrowing the roadway. Subsequent to this workshop, and in conjunction with the comments received from the public, staff began a concerted effort to identify and analyze all of the potential constraints related to the potential option for narrowing Rockfield Boulevard; the results of which are highlighted in the Discussion section of this report.

Given that the overall goals of this project are to improve traffic and pedestrian safety, as well as implement traffic calming measures, staff completed its due diligence by analyzing the roadway narrowing option to meet those goals. It is also appropriate to examine additional potential project alternatives as part of any environmental review or analysis under the California Environmental Quality Act (CEQA).

The City's consultant traffic engineer for this project developed a traffic study and synchronization model based on a 2-lane configuration for Rockfield Boulevard between El Toro Road and Los Alisos Boulevard. Although this portion of Rockfield Boulevard was designed to primarily serve residential traffic, it also handles cut-through traffic heading into portions of Mission Viejo from the I-5 Freeway. The traffic engineering analysis conducted for the 2-lane option utilized traffic count data derived from the year 2030 peak hour traffic volumes developed for the Lake Forest Transportation Mitigation (LFTM) Improvements Program.

Approximately 20,000 daily vehicle trips are anticipated along this stretch of Rockfield by the year 2030. The traffic engineering analysis estimates that narrowing Rockfield Boulevard to two lanes would reduce daily vehicle trips between Los Alisos Boulevard and El Toro Road by 5,900.

The engineering analysis indicates that the displacement of 5,900 daily vehicle trips to surrounding arterial roads would be a result of anticipated lower operating speeds on Rockfield Boulevard as a two-lane roadway. In addition, studies have shown that installing a raised landscaped median on an arterial roadway can reduce traffic speeds by 3-5 mph. The posted speed limit on this stretch of Rockfield is currently 40 mph. Whenever a physical change to the roadway has occurred, such as a narrowed roadway or the installation of a raised median, the responsible agency is required to subsequently conduct a traffic speed survey to determine a new prima fascia speed limit based on the 85th percentile speed of normal traffic. After reviewing the above mentioned data and analysis, staff concluded that the combination of a narrowed roadway, reduced vehicle trips and the traffic calming effect of landscaped medians has the potential for achieving increased traffic safety and congestion relief for this corridor, and that further study of the narrowing option was warranted.

DISCUSSION:

Based on preliminary data and Council direction, staff and consultants further evaluated the costs and benefits of narrowing Rockfield Boulevard between Los Alisos Boulevard and El Toro Road. During the evaluation, staff identified several issues that could potentially constrain the City's ability to narrow Rockfield Boulevard and result in only marginally improved conditions in comparison to costs:

- Potential impacts to residential traffic circulation
- Amendment to the Master Plan of Arterial Highways (MPAH)
- Length of time required to obtain approvals from other agencies
- Associated project costs related to narrowing option

Potential impacts to residential traffic circulation

After considering the comments received from the public at the October 28, 2008, community workshop, staff determined that it would be helpful to expand the traffic study and synchronization model to include a traffic impact analysis around Gates Elementary School. The synchronization model indicates that there could be

brief periods on weekday afternoons where the vehicle queue on Landisview Avenue east of Rockfield Boulevard could exceed its storage capacity and negatively impact traffic on surrounding residential streets. The City's consultant traffic engineer concluded that this impact could be mitigated by adjusting the signal timing at this intersection for approximately 20 minutes in the afternoon to provide additional green time at the signal for traffic turning left onto Rockfield from Landisview. However, this would result in additional red time for traffic traveling on Rockfield Boulevard, thus potentially resulting in a slight increase of congestion on Rockfield during this time period.

Amendment to the Master Plan of Arterial Highways

Rockfield Boulevard is currently designated in the City's General Plan and the Master Plan Arterial Highways (MPAH) as a four-lane primary arterial highway. Staff confirmed with the Orange County Transportation Authority (OCTA) that an amendment to the MPAH would be required prior to the narrowing of Rockfield Boulevard. The process to amend the MPAH would generally entail the following:

- Letter to OCTA and the cities of Mission Viejo and Laguna Hills from the City of Lake Forest stating Lake Forest's desire to narrow Rockfield Boulevard; initiating the MPAH amendment process
- City to confer with the cities of Mission Viejo and Laguna Hills to discuss the project, existing traffic studies and obtain initial input from those cities
- Conference with OCTA to discuss the project and MPAH process
- Conference with the Growth Management Area
- Enter into a cooperative study agreement and cooperative work study program with OCTA, Mission Viejo and Laguna Hills with potential additional traffic engineering analysis
- City General Plan Amendment with environmental analysis
- OCTA Board of Directors approval of MPAH amendment

Length of time to approve MPAH amendment

Staff anticipates the MPAH amendment process would take a minimum of 12 months to complete, and it would require the cooperation of adjacent communities to ensure an expedient and successful conclusion. City staff previously met with Mission Viejo staff to discuss this project and the potential for narrowing the roadway, and shared with them the traffic engineering study and synchronization models. While Mission Viejo City staff has not taken an official position on the

narrowing option, they did advise City staff that concerns regarding the narrowing option and traffic impacts to Mission Viejo had been raised from some of their residents living near Rockfield Boulevard.

Associated project costs

The City's traffic engineering consultant concluded that narrowing Rockfield Boulevard would require the City to construct a traffic mitigation measure at the intersection of El Toro Road and Muirlands Boulevard. The mitigation measure would involve construction of a fourth eastbound through-lane on El Toro Road at the Muirlands Boulevard intersection. The consultant's recommendation to add a fourth eastbound through-lane is based on an anticipated increase to the traffic volume at this intersection should a narrowing option be implemented. The initial cost estimate for this mitigation measure is approximately \$600,000; some of that cost, however, could be eligible for reimbursement under the City's traffic mitigation program associated with the Opportunities Study.

Staff Recommendation

Staff believes evaluating the narrowing option was appropriate and worth the time and effort as it provided creative alternative solutions to traffic safety concerns of this area. However, after reviewing and analyzing the significant level of effort and resources required to narrow the roadway, staff recommends that the streetscape improvements be constructed within the existing 4-lane roadway configuration. This recommendation is based on several factors that include the issues discussed at the third community workshop, the additional construction costs associated with the narrowing option, and a potentially protracted MPAH amendment process, which would add a considerable amount of time to the final delivery of the project.

Given the length of time and additional costs associated with the narrowing option, staff believes that project feature would result in marginally greater traffic and landscape benefits than those provided by 4-lane configuration improvements delivered sooner at less cost. When juxtaposed against the 2-lane option, the streetscape improvements as proposed within the 4-lane configuration should still sufficiently satisfy the project's overall goals of implementing traffic calming and safety measures, enhanced pedestrian connections to The Arbor, and still enhance the aesthetics of this corridor and neighborhood. It should be noted however that the present improvements for the 4-lane configuration does not limit the City's options in the future.

For the purposes of this Master Plan, staff recommends that the narrowing option not be further reviewed as a project option while conducting the environmental assessment under CEQA. As a consequence, the CEQA review for this project would include an Initial Study and a Negative Declaration based on the four-lane roadway configuration once the Master Plan has been approved.

Next Steps/Project Schedule

In the instance that the City Council concurs with the recommendation, the following schedule would apply to the project:

- Preparation of final construction plans, bid specifications and environmental review for Phase 1 construction:
 January 2010 – June 2010
- Approval of construction plans, bid specifications and authorization to bid for Phase 1 construction:
 July 2010
- Award of construction contract:

September 2010

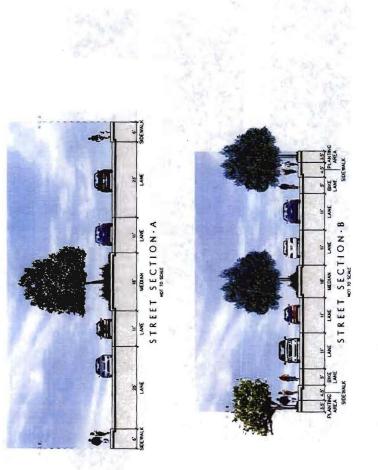
• Construction period:

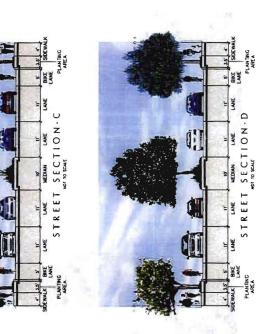
October 2010 - June 2011

Attachment: Rockfield Boulevard Streetscape Master Plan

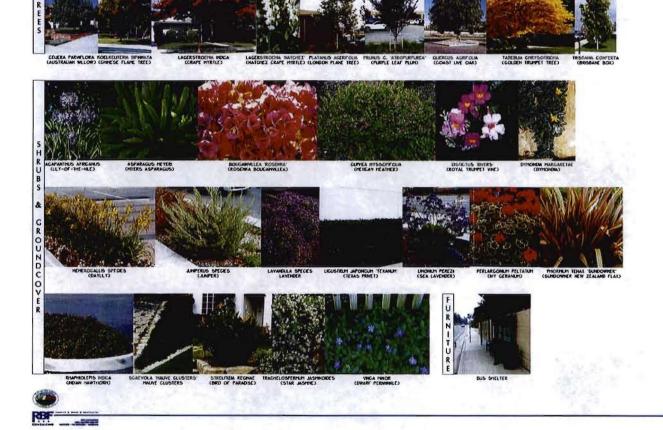
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Rockfield Boulevard Streetscape - Street Sections
November 2009







Rockfield Boulevard Streetscape - Plant Palette and Hardscape Elements

November 2009

Rockfield Boulevard Streetscape Master Plan Cost Estimate

The following Streetscape Master Plan cost estimate is an opinion of probable construction costs to use for budgetary purposes. The estimate is broken down into the three project phases. Also, the estimate also makes the following assumptions, which could have significant cost implications based on the final design:

- Pavement removals within the median assume 1' depth
- Street lighting is assumed to be relocated and reused
- All utility relocations, if necessary, will be provided by the serving utility
- No additional right-of-way will be required
- New and modifications to traffic signals are excluded
- Reconstruction of the existing pavement will not be necessary
- No new drainage facilities will be required
- All options include the removal and replacement of sidewalk
- All phases assume that a 4' wide portion of sidewalk is removed for planting and that 4' remain
- Electrical / landscape lighting costs assumes up-lighting for median and parkway trees

DESCRIPTION	STREETSCAPE MASTER PLAN			
	PHASE 1	PHASE 2	PHASE 3	TOTAL
	Los Alisos to El Toro	El Toro to Ridge Route	Ridge Route to Centre Drive	Phases 1-3
R & R SUBTOTAL	\$131,952	\$93,660	\$115,092	\$340,704
ROADWAY SUBTOTAL	\$309,000	\$409,400	\$259,600	\$978,000
TRAFFIC SUBTOTAL	\$80,000	\$70,000	\$70,000	\$220,000
LANDSCAPE	\$429,087	\$319,804	\$402,588	\$1,151,479
HARDSCAPE	\$192,000	\$235,190	\$286,100	\$713,290
ELECTRICAL / LANDSCAPE LIGHTING	\$200,000	\$200,000	\$200,000	\$600,000
CONSTRUCTION ADMINISTRATION AND INSPECTION SERVICES	\$80,000	\$80,000	\$80,000	\$240,000
GRAND TOTAL	\$1,422,039	\$1,408,054	\$1,413,380	\$4,243,473

Rockfield Boulevard Streetscape Master Plan Construction Phasing

The Rockfield Boulevard Streetscape Master Plan has been divided into three phases. The following table identifies the preliminary construction cost estimates associated with the proposed improvements for each phase. Enlarged graphics of each phase are shown on pages 10, 11, and 12.

PHASE	CONSTRUCTION COSTS	DESIGN PERIOD	CONSTRUCTION PERIOD	
Phase 1 - Los Alisos to El Toro	\$1,422,039	6-8 months	8-10 months	
Phase 2 - El Toro to Ridge Route	\$1,408,054	6-8 months	7-9 months	
Phase 3 - Ridge Route to Centre Drive	\$1,413,380	5-7 months	6-8 months	

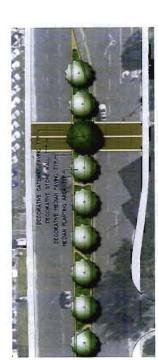






Rockfield Boulevard Streetscape - Phase 2





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INDIANA COMERIA

PLATANUS ACERTOLIA

GOTTON NATES
AUSTRALMS WILLOW
GOVEST FLAME TREE
NATCHEE CRAPE PITRILE

BOLDNEN HAYE

PLANT LEGEND

ENLARGED PLAN VIEW

Rockfield Boulevard Streetscape - Phase 3

DECORATIVE HEDIAN PAVNG

BUS SHELTERS

DECORAINE CATEWAY PANNO CONCRETE SOEWAIN DECORAINE CONCRETE CROSSWAIN CATEWAY WALL

HARDSCAPE LEGEND

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